



Q&A

Q:

What is the purpose of the Outgoing Number Conversion and Number Type Templates in the Atlas?

A:

The Outgoing Number Conversion and Number Type Template are used to manipulate the number of digits sent to a carrier on an outbound call as well as the Number Type/Plan in the Q.931 Setup message for the Calling Party Number and Called Party Number Information Elements. The Outgoing Number Conversion defaults to 'ISDN-National As Dialed' for a Dial Plan -> Network Term PRI entry. Below is the default Number Type Template:

#	Prefix	Pattern	Number Type
1		NXX-XXXX	Local
2		(NXX) NXX-XXXX	National
3		911	Local
4	011	X\$	International
5		NXX	Unknown
6		NXXX	Unknown
7	1	(NXX) NXX-XXXX	National

Figure 1 shows the options available for Outgoing Number Conversion:

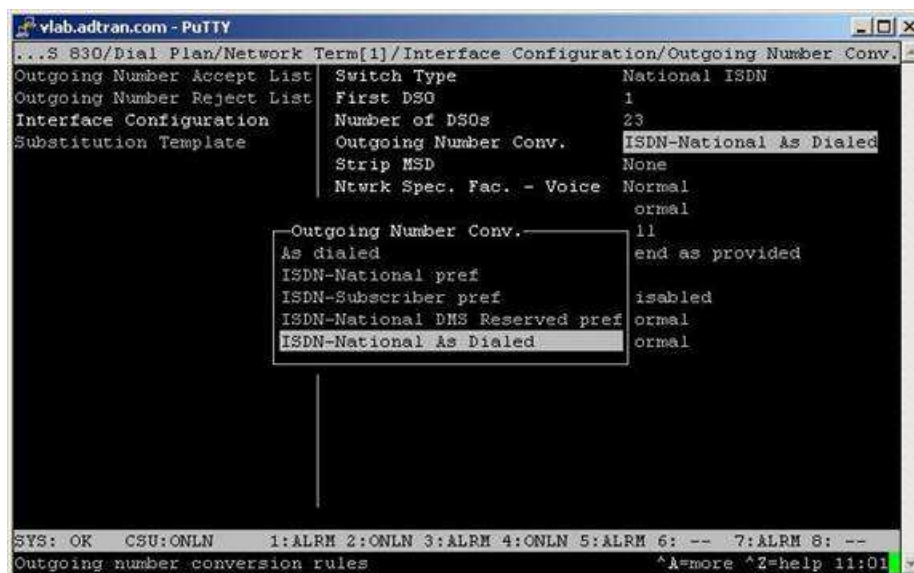


Figure 1

Below you will find a description of how each Outgoing Number Conversion type interacts with the Number Type Template and what the default behavior for each setting is:

As Dialed

- Looks in the Number Type Template for a match
- Strips Prefix and sends call as configured Type
- By Default
 - If it sees 7 digits, it doesn't strip digits and sends as Local

- If it sees 10 digits, it doesn't strip digits and sends as National
- If it sees 11 digits, it strips the Prefix (1) and sends as National
- If it sees 011 + any digits, it strips the Prefix (011) and sends as International
- If the 1 or 011 need to be sent, move them from the Prefix to the Pattern and they will be sent out

ISDN – National As Dialed

- Always sends the call tagged as National
- Changing the Prefix and/or Pattern in the Number Type Template has no effect

ISDN – National Preferred

- By Default
 - If it sees 7 digits, it adds the configured Area Code and sends as National
 - If it sees 10 digits, it doesn't strip digits and sends as National
 - If it sees 11 digits, it strips the Prefix (1) and sends as National
 - If it sees 011 + any digits, it strips the Prefix (011) and sends as International
 - If the 1 or 011 need to be sent, move them from the Prefix to the Pattern and they will be sent out

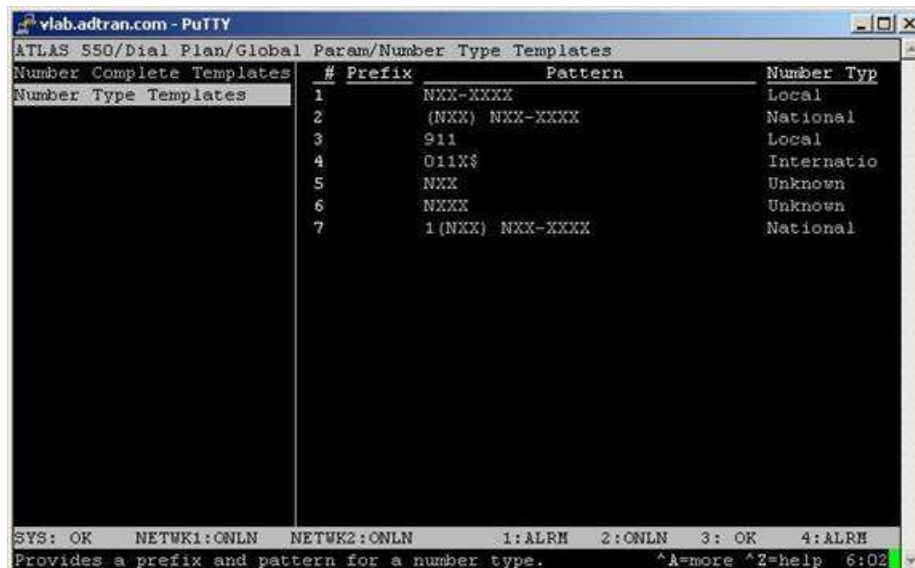
ISDN – Subscriber Preferred

- By Default
 - If it sees 7 digits, it doesn't strip digits and sends as Subscriber
 - If it sees 10 digits, it doesn't strip digits and sends as National
 - If it sees 11 digits, it strips the Prefix (1) and sends as National
 - If it sees 011 + any digits, it strips the Prefix (011) and sends as International
 - If the 1 or 011 need to be sent, move them from the Prefix to the Pattern and they will be sent out

ISDN – National DMS Reserved Preferred

- Call Type/Plan is always 0xA2 (0xA2 is Type – National and Plan – Reserved for DMS use)
- Number is always sent as received (no adding/stripping of digits)

One of the most common problems with the Outgoing Number Conversion is when set to 'As Dialed'. By default, this causes the Atlas to strip the leading 1 or 011 on Long Distance and International calls respectively. To preserve the leading 1 or 011, these numbers must be moved from the Prefix column of the Number Type Template into the Pattern column in front of the existing pattern. Figure 2 shows an example of how this would look:



#	Prefix	Pattern	Number Typ
1	NXX-XXXX		Local
2	(NXX) NXX-XXXX		National
3	911		Local
4	011X\$		Internatio
5	NXX		Unknown
6	NXXX		Unknown
7	1(NXX) NXX-XXXX		National

At the bottom of the terminal window, there is a status bar with the following text: SYS: OK NETWK1:ONLN NETWK2:ONLN 1:ALRM 2:ONLN 3: OK 4:ALRM Provides a prefix and pattern for a number type. ^A=more ^Z=help 6:02

Figure 2

Below you will find the output from test calls when using each Outgoing Number Conversion type with the default Number Type Template as well as with the 1 and 011 moved from the Prefix column to the Pattern column for their respective entries. The options discussed in this article only affect the call as it is leaving the Atlas to go to the carrier and not as it comes in to the Atlas.

Test Call Debugs

All calls came in on a PRI and left on a PRI with the Outgoing Number Conversion configured appropriately for each section. All Global Parameters were at the default unless otherwise noted.

```

ISDN-National As Dialed

7 digit (555-1000)

Comes in as:
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=8
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 5551000

Goes out as:
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=8
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 5551000

10 digit (256-555-1000)

Comes in as:
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=11
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 2565551000

Goes out as:
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=11
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 2565551000

11 digit (1-256-555-1000)

Comes in as:
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=12
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 12565551000

Goes out as:
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=12
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 12565551000

Moving 1 or 011 to the pattern has no effect

```

As Dialed

```
7 digit (555-1000)
```

Comes in as:

```
L2-Formatted|Ntw2|1|      IE - 70 CALLED PARTY #      Len=8
L2-Formatted|Ntw2|1|      80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|      Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|      Ph.# 5551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|      IE - 70 CALLED PARTY #      Len=8
L2-Formatted|Ntw1|1|      C1 Numb. Type:SUBSCRIBER
L2-Formatted|Ntw1|1|      Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|      Ph.# 5551000
```

10 digit (256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|      IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw2|1|      80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|      Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|      Ph.# 2565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|      IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw1|1|      A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|      Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|      Ph.# 2565551000
```

11 digit (1-256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|      IE - 70 CALLED PARTY #      Len=12
L2-Formatted|Ntw2|1|      80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|      Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|      Ph.# 12565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|      IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw1|1|      A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|      Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|      Ph.# 2565551000
```

International (011-256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|      IE - 70 CALLED PARTY #      Len=14
L2-Formatted|Ntw2|1|      80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|      Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|      Ph.# 0112565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|      IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw1|1|      91 Numb. Type:INTERNATIONAL
L2-Formatted|Ntw1|1|      Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|      Ph.# 2565551000
```

Move 1 to the pattern 11 digit call (1-256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|      IE - 70 CALLED PARTY #      Len=12
L2-Formatted|Ntw2|1|      80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|      Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|      Ph.# 12565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=12
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 12565551000
```

Move 011 to the patter International call (011-256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=14
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 0112565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=14
L2-Formatted|Ntw1|1|          91 Numb. Type:INTERNATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 0112565551000
```

ISDN-National Preferred (Area code set to 000)

7 digit (555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=8
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 5551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=11
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 0005551000
```

10 digit (256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=11
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 2565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=11
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 2565551000
```

11 digit (1-256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #          Len=12
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 12565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #          Len=11
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 2565551000
```

International (011-256-555-1000)

Comes in as:

L2-Formatted Ntw2 1	IE - 70 CALLED PARTY #	Len=14
L2-Formatted Ntw2 1	80 Numb. Type:UNKNOWN	
L2-Formatted Ntw2 1	Numb. Plan:UNKNOWN	
L2-Formatted Ntw2 1	Ph.# 0112565551000	

Goes out as:

L2-Formatted Ntw1 1	IE - 70 CALLED PARTY #	Len=11
L2-Formatted Ntw1 1	91 Numb. Type:INTERNATIONAL	
L2-Formatted Ntw1 1	Numb. Plan:ISDN/Telephony	
L2-Formatted Ntw1 1	Ph.# 2565551000	

Move 1 and 011 to pattern and made 11 digit and International call

11 digit

Comes in as:

L2-Formatted Ntw2 1	IE - 70 CALLED PARTY #	Len=12
L2-Formatted Ntw2 1	80 Numb. Type:UNKNOWN	
L2-Formatted Ntw2 1	Numb. Plan:UNKNOWN	
L2-Formatted Ntw2 1	Ph.# 12565551000	

Goes out as:

L2-Formatted Ntw1 1	IE - 70 CALLED PARTY #	Len=12
L2-Formatted Ntw1 1	A1 Numb. Type:NATIONAL	
L2-Formatted Ntw1 1	Numb. Plan:ISDN/Telephony	
L2-Formatted Ntw1 1	Ph.# 12565551000	

International

Comes in as:

L2-Formatted Ntw2 1	IE - 70 CALLED PARTY #	Len=14
L2-Formatted Ntw2 1	80 Numb. Type:UNKNOWN	
L2-Formatted Ntw2 1	Numb. Plan:UNKNOWN	
L2-Formatted Ntw2 1	Ph.# 0112565551000	

Goes out as:

L2-Formatted Ntw1 1	IE - 70 CALLED PARTY #	Len=14
L2-Formatted Ntw1 1	91 Numb. Type:INTERNATIONAL	
L2-Formatted Ntw1 1	Numb. Plan:ISDN/Telephony	
L2-Formatted Ntw1 1	Ph.# 0112565551000	

ISDN-Subscriber Preferred

7 digit (555-1000)

Comes in as:

L2-Formatted Ntw2 1	IE - 70 CALLED PARTY #	Len=8
L2-Formatted Ntw2 1	80 Numb. Type:UNKNOWN	
L2-Formatted Ntw2 1	Numb. Plan:UNKNOWN	
L2-Formatted Ntw2 1	Ph.# 5551000	

Goes out as:

L2-Formatted Ntw1 1	IE - 70 CALLED PARTY #	Len=8
L2-Formatted Ntw1 1	C1 Numb. Type:SUBSCRIBER	
L2-Formatted Ntw1 1	Numb. Plan:ISDN/Telephony	
L2-Formatted Ntw1 1	Ph.# 5551000	

10 digit (256-555-1000)

Comes in as:

L2-Formatted Ntw2 1	IE - 70 CALLED PARTY #	Len=11
---------------------	------------------------	--------

```
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 2565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 2565551000
```

11 digit (1-256-555-1000)

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #      Len=12
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 12565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 2565551000
```

International (011-256-555-1000)

comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #      Len=14
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 0112565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #      Len=11
L2-Formatted|Ntw1|1|          91 Numb. Type:INTERNATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 2565551000
```

Move 1 and 011 to pattern and made 11 digit and International call

11 digit

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #      Len=12
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 12565551000
```

Goes out as:

```
-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #      Len=12
L2-Formatted|Ntw1|1|          A1 Numb. Type:NATIONAL
L2-Formatted|Ntw1|1|          Numb. Plan:ISDN/Telephony
L2-Formatted|Ntw1|1|          Ph.# 12565551000
```

International

Comes in as:

```
L2-Formatted|Ntw2|1|          IE - 70 CALLED PARTY #      Len=14
L2-Formatted|Ntw2|1|          80 Numb. Type:UNKNOWN
L2-Formatted|Ntw2|1|          Numb. Plan:UNKNOWN
L2-Formatted|Ntw2|1|          Ph.# 0112565551000
```

Goes out as:

```
L2-Formatted|Ntw1|1|          IE - 70 CALLED PARTY #      Len=14
L2-Formatted|Ntw1|1|          91 Numb. Type:INTERNATIONAL
```

L2-Formatted|Ntwl|1|
L2-Formatted|Ntwl|1|

Numb. Plan:ISDN/Telephony
Ph.# 0112565551000

ISDN-National DMS Reserved Preferred

Call Type/Plan always 0xA2 and number is sent as received
0xA2 is Type-National Plan-reserved for dms